

Appln. No. 09/216,378  
Amendment dated January 19, 2009

### **REMARKS**

Reconsideration is respectfully requested.

Claims 6, 18 through 20 and 22 through 38 have been cancelled.

No claims have been withdrawn.

Claims 46 and 47 have been added.

Therefore, claims 1 through 5, 7 through 17, 21, 39 through 41 and 43 through 47 are pending in this application.

### **Amendments to Claims**

Claim 13 has been amended to require that "the step of generating a noise cancellation signal includes applying a key click profile to the electrical signal to compensate for a keyboard noise level detected by the microphone in the noise cancellation signal generated." Claims 16 and 41 require that "the noise cancellation module applies a key click profile to the ambient noise detected by the microphone to compensate for a keyboard noise level detected by the microphone in the noise cancellation signal." New claim 46, which depends from claim 1, includes a similar requirement. These features are disclosed in the specification and drawings of the patent application, particularly at page 6, lines 20 et seq. It is submitted that none of the cited patents disclose or suggest this feature.

Further, claim 16 requires "a portable housing having a keyboard portion and a monitor portion in a clamshell arrangement", "a microprocessor integrated into the keyboard portion of the housing", "at least one speaker integrated into the keyboard portion of the housing", and that "the digital signal processor being connected to the at least one speaker integrated on the housing of the mobile computer system such that the mixed signal is applied to the at least one speaker." New claim 47 requires "at least one speaker integrated into the housing, the digital signal

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processor being connected to the at least one speaker such that the mixed signal is available to the at least one speaker and the standard headphone compatible output." This feature of the invention is disclosed throughout the patent application, for example, at page 5, lines 17 et seq. of the specification and in Figure 2 of the drawings. It is submitted that this feature of the claimed system is also not disclosed or suggested by the cited art.

#### **Previous Rejection of Claims**

Claims 1 through 5, 7 through 17, 21, 39 through 41 and 43 through 45 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Lambrecht in view of Lo.

Claim 1 requires "a microphone built into the housing to detect noise ambient to the housing". Claim 8 requires "detecting noise ambient to a case of the mobile computer system through a microphone built-in to the case of the mobile computer system". Claim 13 requires "detecting environmental background noise through a microphone integrated into a case of the computer". Claim 16 requires "a microphone integrated into the display portion of the housing to detect noise ambient to the housing". Claim 41 requires "a microphone integrated into the housing to detect noise ambient to the housing". As previously noted, the claims recite a system that utilize the elements integral to an otherwise conventional portable computer and conventional headphones without requiring specialized hardware for the computer or specialized headphones.

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It is conceded in the rejection that "Lambrecht does not explicitly teach that the microphone is of a built-in type", but it is then asserted that:

Lambrecht teaches the microphone is physically located with the speaker, which in turn is a conventional speaker (col. 3, lines 48-53).

Looking to the cited portion of the Lambrecht patent at col. 3, lines 48 through 53, it states:

Microphone 108 is a conventional microphone that converts sound to electrical audio signals. In one embodiment, the microphone is physically located with the speaker or headphone. Speaker 110 is conventional speaker or headphone for converting electrical audio signals to audible sound.

While the Lambrecht patent does generally discuss "physically locat[ing]" the microphone "with the speaker", it specifically states that "the microphone is physically located with the \*\*\* headphone", and one of ordinary skill in the art would understand the headphone in Figure 1 includes the speaker.

And it is further asserted in the rejection that

One of ordinary skill in the art would have realized that for the PC (notebook computer 154) as shown in figure 1, the speaker would have been built into the PC/notebook computer. Therefore, the microphone would have been built into the PC/notebook computer, to be physically located in the computer housing for saving space and used less wire.

As for the contention that "as shown in figure 1, the speaker would have been built into the PC/notebook computer", it is submitted that one of ordinary skill in the art, considering the statement in Lambrecht at column 3, lines 48 through 53, would understand that in Figure 1 the microphone is located "with the speaker" in the headphone, and "with... the headphone". The possibility that the laptop shown in Figure 1 may include a speaker does not detract from the fact that Figure 1 shows a "headphone" with a "speaker", and understands that a headphone is at its essence a pair of speakers. The rejection does not explain why one of ordinary skill in the art would ignore the fact that the headphone is a speaker and assume that Lambrecht means a speaker that might be located in the laptop instead of

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right in the headphone. In any event, one of ordinary skill in the art would recognize that speaker that is operational in Figure 1 is not the speaker in the laptop, it is the one in the headphone, as one of ordinary skill in the art would recognize that the user wearing the headphone cannot hear any speaker locate din the laptop, and would recognize that once the headphone is plugged into the jack in the laptop, the speaker in the laptop is turned off.

It is therefore submitted that the assumption made in the rejection regarding the location of the microphone of Lambrecht is not supportable based upon the disclosure in Lambrecht.

Further, Lambrecht states at col. 3, lines 54 through 61 that:

The noise environment is sensed via microphone 108. Microphone 108 senses the noise environment and converts the noise to electrical audio signals which represent the noise and are received by CODEC 106. Microphone 108 detects the noise that is desired to be cancelled. Typically, the noise desired to be cancelled is background noise. For example, the background noise of an airplane may be sampled by microphone 108.

It is submitted that one of ordinary skill in the art would recognize that the "noise environment" discussed in Lambrecht would be most effectively sensed at the speaker in the headphone of the system, and thus adjacent to the ear of the user where the noise would be received by the user, rather than at the laptop, which may be subjected to noises (such as the cooling fan of the laptop) that the ear of the user would not receive, at least to the extent at the laptop.

Further, the Lo patent does not disclose this shortcoming in the Lambrecht patent.

The remarks in the Advisory Action state:

The examiner responds that as discussed in the rejection of claim 1, while Lambrecht does not explicitly teach that the microphone is of a built-in type, Lambrecht teaches the microphone is physically

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located with the speaker, and the speaker in turn is a conventional speaker (col. 3, lines 48-53). One of ordinary skill in the art would realize that for the PC (notebook computer 154) as shown in figure 1, the speaker would be built into the PC / notebook computer. In other words, the microphone would be built into the PC / notebook computer, to be physically located with the speaker for saving space and less wiring. Predictably, a microphone can be built in the notebook computer and the microphone would function to detect the ambient noise. Therefore, the claimed limitation is met by Lambrecht, and the rejection is maintained.

Again, the line of argument in the rejection is based upon speculation that a microphone could be built into the notebook computer and a speaker could be built into the notebook computer, and that one of ordinary skill in the art would understand that that is what is meant by Lambrecht when stating that the microphone is located with the speaker or microphone. The Lambrecht patent shows the speaker as a part of the headphone in Figure 1 separate of the notebook computer, and does not show any position of the microphone with respect to the speaker, save for the schematic showing in Figures 2 and 3 of the speaker and microphone as separate elements. It is submitted that the line of argument in the rejection requires one of ordinary skill in the art to make all of the right choices presumed in the rejection in order to arrive at the claimed invention.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Lambrecht and Lo set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 1, 8, 13, 16 and 41. Further, claims 2, 3, 5, 7, 21 and 39, which depend from claim 1, claim 4, which depends from claim 3, claims 9 through 12, which depend from claim 8, claims 14, 15 and 40, which depend from claim 13, claim 17, which depends from claim 16, and claims 43 through 45, which depend from claim 41 also include the requirements discussed above and therefore are also submitted to be in condition for allowance.

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Withdrawal of the §103(a) rejection of claims 1 through 5, 7 through 17, 21, 39 through 41 and 43 through 45 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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By



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